In the Abstract:

Please add the following abstract:

A sensor arrangement and method of operating the sensor arrangement are described. The sensor arrangement has sensor devices formed on or in a substrate and a calibration device for calibrating a respective sensor device. Each sensor device has an electrical signal converter which is a field-effect transistor (FET) having a gate terminal coupled to a sensor element that is coupled to the signal converter, a device that keeps constant the electrical voltage between source and drain terminals of the FET, and a device for detecting the value of the electric current flowing through the signal converter. The sensor element characteristically influences the electrical conductivity of the signal converter on account of a sensor event on the sensor element. The calibration device brings the gate region of the FET to an electrical calibration potential such that the electric current is independent of parameter fluctuations of the FET.